1. A composition for use in making commercial products, comprising R-equol.

2. The composition according to Claim 1 wherein the composition is made by isolating R-equol from a racemic mixture of S-equol and R-equol.

3. The composition according to Claim 1, consisting essentially of R-equol.

4. The composition according to Claim 3 wherein the R-equol has an enantiomeric purity of 90% minimum enantiomeric excess (EE).

5. The composition according to Claim 4 wherein the R-equol has an enantiomeric purity of 96% minimum EE.

6. A food composition comprising an additive component comprising R-equol.

7. The food composition according to Claim 6, wherein the food comprises, per serving of food, at least about 1 mg, and up to about 300 mg, R-equol.

8. The food composition according to Claim 7, wherein the food comprises, per serving of food, at least about 10 mg, and up to about 200 mg, R-equol.

9. A composition for topical application to skin, comprising R-equol and a vehicle.

10. The composition for topical application to skin according to Claim 9, comprising by weight at least 0.1%, and up to 10%, of R-equol.

11. The composition according to Claim 9 where the R-equol is conjugated at the C-4' or C-7 position to form a conjugate selected from the group consisting of glucuronide, sulfate, acetate, propionate, glucoside, acetyl-glucoside, malonyl-glucoside, and mixtures thereof.

12. A method of delivering R-equol to a mammal to prevent or treat a disease or associated condition, comprising administering to the mammal a composition comprising R-equol or a conjugated analog thereof.

13. The method according to Claim 12 where the composition is administered in an amount sufficient to produce a transient level of S-equol in the blood plasma of the mammal of at least 5 ng/mL.

14. The method according to Claim 12 where R-equol is conjugated at the C-4'or C-7 position to form a conjugate selected from the group consisting of glucuronide, sulfate, acetate, propionate, glucoside, acetyl-glucoside, malonyl-glucoside, and mixtures thereof.

15. The method according to Claim 12 where the composition is administered to the mammal orally in a dose amount of at least about 1 mg R-equol.

16. The method according to Claim 12 where disease comprises a hormone-dependent disease or condition selected from group consisting of cardiovascular disease, diminished blood vessel quality, lipid disorder, osteopenia, osteoporosis, liver disease, acute ovarian estrogen deficiency, benign breast cancer, breast cancer, benign prostate cancer, prostate cancer, skin cancer, colon cancer, vasomotor disturbances and night sweats associated with ovarian estrogen deficiency or antiestrogen therapy, impaired cognition, dementia, and brain disorders manifest as short or long-term memory loss.

17. The method according to Claim 16 wherein the hormone-dependent disease or condition is selected from group consisting of cardiovascular disease, diminished blood vessel quality, lipid disorder, osteopenia, osteoporosis, liver disease, and acute ovarian estrogen deficiency.

18. The method according to Claim 17 wherein the composition is administered in an amount sufficient to reduce the level of lipids in the blood or serum.

19. The method according to Claim 17 wherein the composition is administered in an amount sufficient to reduce the surrogate markers of bone turnover or prevent bone loss as measured by bone mineral density.

20. The method according to Claim 17 wherein the composition is administered in an amount sufficient to increase bone formation.

21. The method according to Claim 17 wherein the composition is administered in an amount sufficient to prevent osteoporosis and reduce bone fracture.

22. The method according to Claim 16 wherein the hormone-dependent disease or condition is selected from a group consisting of benign breast cancer, breast cancer, benign prostate cancer, prostate cancer, skin cancer, and colon cancer.

23. The method according to Claim 16 wherein the hormone-dependent disease or condition is selected from a group consisting of vasomotor disturbances and night sweats associated with ovarian estrogen deficiency.

24. The method according to Claim 16 wherein the hormone-dependent disease or condition is selected from a group consisting of impaired cognition, dementia, and brain disorders manifest as short or long-term memory loss.

25. The method according to Claim 12 where disease comprises a non-hormone-dependent disease or condition selected from group consisting of inflammatory conditions of the gastrointestinal tract, the prostate, the breast, the skin and bone, and a condition associated with adenomatous polyps and familial polyposis.

26. The method according to Claim 25 wherein the non-hormone-dependent disease or condition is selected from group consisting of a condition associated with adenomatous polyps and familial polyposis.

27. The method according to Claim 25 wherein the non-hormone-dependent disease or condition is selected from group consisting of inflammatory conditions of the gastrointestinal tract, the prostate, the breast, the skin and bone.

28. The method according to Claim 12 wherein the composition is administered as a food or food additive.